

## **REMARKS**

The present Amendment is in response to the Examiner's Office Action mailed August 2, 2006. Claims 8-10, 15, 16, 18, 24, 26, 33, and 34 are cancelled and claims 1 and 21 are amended. Claims 1-9, 11-14, 17, 19-23, 25, 27-32, and 35 are now pending in view of the above amendments.

Reconsideration of the application is respectfully requested in view of the above amendments to the claims and the following remarks. For the Examiner's convenience and reference, Applicant's remarks are presented in the order in which the corresponding issues were raised in the Office Action.

Please note that the following remarks are not intended to be an exhaustive enumeration of the distinctions between any cited references and the claimed invention. Rather, the distinctions identified and discussed below are presented solely by way of example to illustrate some of the differences between the claimed invention and the cited references. In addition, Applicants request that the Examiner carefully review any references discussed below to ensure that Applicants understanding and discussion of the references, if any, is consistent with the Examiner's understanding.

### **I. Rejection Under 35 U.S.C. § 112, Second Paragraph**

The Examiner rejects claims 18-19 under 35 U.S.C. § 112, Second Paragraph for indefiniteness on the grounds the claims are unclear as to omitted structural connections. Claim 18 has been canceled. Therefore, the rejection of claim 18 is moot.

The Applicant assumes that the Examiner meant claim 21 instead of claim 19 as such elements do not appear in claim 19. Claim 21 has been amended to clearly define the axis from which the incline is relative to. As such, the Applicant believes that the claims are clear and respectfully requests that the rejections of claims 18 and 19 be withdrawn.

### **II. PRIOR ART REJECTIONS**

#### **A. Rejection Under 35 U.S.C. § 103**

The Examiner rejects claims 1, 2, 4-6, 8, 11-14, 17-18, 21-22, 25, 27, 28, 30-31, and 35 under 35 U.S.C. § 103 as being unpatentable over *Zimmermann* (U.S. Patent No. 6,580,734) in

view of *Anthon* (U.S. Patent No. 6,125,222). The Examiner rejects claims 3 and 7 under 35 U.S.C. § 103 as being unpatentable over *Zimmermann* in view of *Tomlinson et al* (U.S. Patent Application Publication 2003/0035449). The Examiner rejects claims 19, 23, 29, and 32 under 35 U.S.C. § 103 as being unpatentable over *Zimmermann* in view of *Daiber et al* (U.S. Patent Application Publication 2003/0012239). The Examiner rejects claims 19, 20, and 26 under 35 U.S.C. § 103 as being unpatentable over *Zimmermann*.

According to the applicable statute, a claimed invention is unpatentable for obviousness if the differences between it and the prior art “are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art.” 35 U.S.C. § 103(a) (2005); *Graham v. John Deere Co.*, 383 U.S. 1, 14 (1966); MPEP 2142. Obviousness is a legal question based on underlying factual determinations including: (1) the scope and content of the prior art, including what that prior art teaches explicitly and inherently; (2) the level of ordinary skill in the prior art; (3) the differences between the claimed invention and the prior art; and (4) objective evidence of nonobviousness. *Graham*, 383 U.S. at 17-18; *In re Dembiczak*, 175 F.3d 994, 998 (Fed. Cir. 1999). It is the initial burden of the PTO to demonstrate a *prima facie* case of obviousness. If the PTO does not set forth a *prima facie* case of obviousness, the applicant is under no obligation to submit evidence of nonobviousness. MPEP 2142 (emphasis added).

According to MPEP section 2143:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

(Emphasis added).

On pages 4 and 5 of the Office Action the Examiner admits that “Zimmerman does not teach ... the optics to be separated from the waveguide.” However, the Examiner alleges that it would be obvious “to one of ordinary skill at the time of the invention to combine the laser module of *Zimmermann* with the separated lenses of *Anthon* in order to enable easier adjustment

of the lenses with the diode, without moving the waveguide, as well as the ability to replace, or repair, an existing lens without the need to replace the waveguide.”

Claim 1 as amended includes the element, “wherein said coupling optics are slightly inclined from a normal of the axis of the optical waveguide” in combination with each and every other element of claim 1. This element of claim 1 includes part of the element formerly recited in claim 18. In response to this element of claim 18 that is now included in claim 1, the Examiner alleges on page 7 of the Office Action that “it is inherent that the coupling optics are slightly inclined. (since the optics are directly connected to the fiber, and the fiber system is constantly being thermally adjusted by the heating element, it is inherent that the pitch of both the fiber and lens will be changed such that they are slightly inclined with respect to the laser diode).” (Emphasis added). The Examiner further cites to *Kapany et al* (U.S. Patent No. 6,480,513) to describe the alleged inherent change in pitch due to thermal effects in the fiber system.

The Examiner’s allegations that it would (1) be obvious to separate the optics from the fiber, and also that (2) the pitch of the optics would vary due to the optics being directly connected to the fiber cannot coexist. Rather, the basis for the second argument does not exist if the former argument is made. As such, if *Zimmerman* were modified as suggested by the Examiner according to the first argument, it would clearly not be inherent that the pitch of the optics would change with the fiber as the optics are no longer coupled to the fiber.

Moreover, the Applicant respectfully traverses the argument that such change in pitch would inherently occur. According to claim 1, the “coupling optics are slightly inclined from a normal of the axis of the optical waveguide”. If the optics were coupled to the end of the fiber as in *Zimmerman*, it is the Applicant’s belief that the angle of the optics would likely change with the axis of the optical fiber. Therefore, the Examiner has not established that the optics would in fact be inclined to the axis of the optical fiber. As such, the Applicant respectfully requests that the rejection of claim 1 be withdrawn.

Further, with regard to *Kapany*, the Applicant respectfully notes that the change in geometric pitch referred to in *Kapany* relates to the geometric pitch of the grating. Col. 3, lines 60-62. Thus, where the lens 94 is coupled to the fiber optic 98 and the heater 84 is coupled to the diode 81 it is unclear how a change in the temperature induced by the heater 84 would vary

the pitch of the lens 94 disposed on the end of the fiber 98. Therefore, for these reasons as well, the Applicant respectfully requests that the rejection of claim 1 be withdrawn.

If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988). Therefore, the Applicant respectfully requests that the rejections of claims 2-9, 11-14, 17, and 19-23 be withdrawn.

Regarding claim 25, the Examiner has not provided concrete evidence of motivation for the element “repeating steps b) to g) regularly throughout a life of the laser module to calibrate the output wavelength.” Rather the Examiner has only provided a conclusory statement that such would be obvious. In fact, the only origin of such teachings of record is in the Applicant’s teachings. Therefore, it appears clear that the rejection of claim 25 is based on impermissible hindsight reconstruction. “[The Patent Office] may not, because it may doubt that the invention is patentable, resort to speculation, unfounded assumptions or hindsight reconstruction to supply deficiencies in its factual basis.” *In re Warner*, 154, USPQ 173, 178 (CCPA 1967). Missing from the references is the “logical reason apparent from positive, concrete evidence of record” (*In re Regel*, 188 USPQ 136, 139 n.5 (CCPA 1975) (emphasis added)) why one of ordinary skill in the art would have been motivated to repeat “steps b) to g) regularly throughout a life of the laser module to calibrate the output wavelength.” The PTO cannot simply make conclusions based on its own understanding or experience – or on its allegation of what would be basic knowledge or common sense. Rather, the PTO must point to some concrete evidence in the record in support of the findings. *In re Zurko*, 59 USPQ2d 1693, 1697 (Fed. Cir. 2001) (emphasis added; footnote omitted).

If the origin of teachings and motivation set forth for the proposed combinations exists in the references then the Applicants request that this origin be set forth by the Patent Office as suggested by MPEP 2144.08 III which states, “[w]here applicable, the finding should clearly articulate which portions of the reference support any rejection. Explicit findings on motivation or suggestion to select the claimed invention should also be articulated in order to support a 35 U.S.C. 103 ground of rejection. Dillon, 919 F.2d at 693, 16 USPQ2d at 1901; *In re Mills*, 916 F.2d 680, 683, 16 USPQ2d 1430, 1433 (Fed. Cir. 1990). Conclusory statements of similarity or motivation, without any articulated rationale or evidentiary support, do not constitute sufficient factual findings.”

If, however, the Examiner is relying on the personal knowledge of the Examiner, pursuant to 37 C.F.R. 1.104(d)(2), Applicant hereby respectfully requests an Examiner affidavit that: (i) specifically identifies any and all references(s), other than those that have been specifically cited by the Examiner, upon which the obviousness rejection of claim 25 is based; and (ii) provides complete details concerning the reasoning and analysis of the Examiner concerning those references as those references are purported to apply to the rejection of claims 25.

Therefore, the Applicant respectfully requests that the rejection of claim 25 be withdrawn for lack of motivation for the proposed modification of Zimmerman. Claims 27-32 and 35 depend from claim 25. As such, the Applicant respectfully requests that the rejection of claims 27-32 and 35 be withdrawn at least for the same reasons as claim 25.

### **CONCLUSION**

In view of the foregoing, Applicants believe the claims as amended are in allowable form. In the event that the Examiner finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, or which may be overcome by an Examiner's Amendment, the Examiner is requested to contact the undersigned attorney.

Dated this 2nd day of February, 2006.

Respectfully submitted,

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